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ABSTRACT

The cognitive behavioral approach to weight maintenance assumes that obese people should be concerned with weight control rather than weight loss, and it embraces both the behavioral approach and a maintenance program which examines risks, value priorities, and the basic principles of weight loss/weight gain. The University of Maryland offers a three credit course for undergraduate students dealing with weight control and maintenance using the cognitive behavioral approach. Each subject is evaluated to determine their individual problem. The evaluation process includes taking of residual volume, weighing skinfolds, and taking of height, weight, and blood pressure. Subjects also complete forms for a weekly diet diary, physiological inventories and anxiety tests, and personal history forms. After test results are fed back to the subjects they are instructed in and asked to set their program goals based on body composition, weight, and realistic expectation for the time allotment. Lessons include determination of energy expenditure, the biophysical value of muscle activity, and metabolism of carbohydrates, fat, and proteins. Psychological aspects are studied to determine their influence on hunger, appetite, and satiety. Behavior modification techniques are presented for use in cases where compulsive eating appears to be a problem. Forty individuals have completed this treatment program and have lost a total of 252.75 pounds in 14 weeks. Follow-up studies reveal that either weight loss continues or a stable weight is maintained. (DMT)

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THE COGNITIVE BEHAVIORAL APPROACH TO WEIGHT MAINTENANCE

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We are still approaching the ideal method of weight maintenance, and when we find it, I for one, would like to recognize it. This calls for programs founded on solid premises and tested for effect through research.

At this point behavior modification programs are highly touted as the best we can offer in weight loss and maintenance. These programs, according to Mahoney (5) rest on four somewhat tenuous assumptions:

* That obesity is a learning disorder
* That the obese are overeaters
* That their eating style is critically different from nonobese
* That if we can train the obese to eat like the nonobese, there will be weight loss

Either the oversimplification of these assumptions or their lack of complete support should encourage those in the area of weight loss and weight control to seek a more complete maintenance program with valid assumptions based on obesity research literature.

A maintenance program must be one that examines risks, value priorities, the basic principles of weight loss-weight gain, and some helpful "tricks of the trade" which include record keeping.

During the past year I have been piloting a weight maintenance treatment technique which I call the Cognitive Behavioral Approach to weight maintenance, as it embraces both elements -- cognition and behavior. I feel that this approach is warranted in that the obesity-overweight problem is not so much involved in weight loss, but rather in weight control: maintenance of a reduced weight over a life long period. Anyone can lose weight, but nearly 90% of weight losers regain the lost weight within a year.

Most medical professionals realize the health implications of carrying around excessive pounds .... elevated blood pressure, greater risk of diabetes, cardiovascular disease, and other diseases and conditions; but my purpose here is not to elaborate on the risks, but to examine an interventive treatment technique.

A treatment technique that is aimed at maintenance cannot be a cute little diet; cannot be behavior tricks; and cannot be social pressure from other fatties (such as in group weight loss programs), from slim husband/wives, or any other external source. These techniques may produce short-term weight loss effectively (or not so effectively), but over the long haul, they are forgotten, despised, or denied by the majority of recidivists.

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From initial results and impressions I have received after seven months of working with this treatment method I feel that the cognitive behavioral approach is more comprehensive than any other I have seen. Using this treatment method, I have established a 3- credit course for undergraduates at the University of Maryland which I also use as a class-clinic for Masters and Doctoral students who choose to specialize in weight control in our department.

This is what the treatment method entails:

First, we find out where each subject is: that is, we identify the problem. Sessions one and two are devoted to underwater weighing (including the taking of residual volume); the taking of skinfolds; the taking of height, weight, and blood pressure. Also, during this first contact subjects are given forms for a weeks diet diary, complete psychological inventories such as Rotter's I-E test and anxiety tests; and fill out a personal history. The diet diary is much like Stunkard's recall form that allows insights into eating behavior. From these I have detected subjects whose great failing was kitchen-and between-meal eating. A notation of 50 Ritz crackers mid-morning, alone, or 4 ice cream bars on the way home from shopping indicates a special problem to be dealt with in an individual way.

After test results are fed back to the subjects, they are instructed in and asked to set their program goal which is based on body composition, weight and realistic expectation for the time period alottment (14 weeks).

A first lesson in the balance of energy involves learning to determine daily energy expenditure using the MET system (1). This has been a popular item of feedback; that is to say, subjects have known how to measure calories in for most of their lives, but have never learned to count calories out and find it an important item to know. With the use of this information each subject then keeps a daily chart of calories in, calories out and daily weight.

An early session is devoted to the biophysical value of muscular activity, including demonstration of muscle toning activities and advantages of cardiovascular exercise. Each subject is asked to step up energy output equivalent to at least one hour of 4 MET activity.

In subsequent sessions, lecture-discussion time includes metabolism of carbohydrates, fats, and proteins, especially how fat is made and under what circumstances foodstuffs are most efficiently turned into fat and stored, such as eating most of one's calories in one or two large meals a day rather than spreading calories out throughout the day.

Nutrition is brought into focus with a total diet recall for a one-week period. This has been a real eye-opener for many subjects as their deficiencies stare at them in black and white.

Since diabetes is one of the most prevalent risk factors in obesity, we spend whatever time it takes to discuss how enlarged fat cells can contribute to a state of frank diabetes; and as cardiovascular disease is also involved, eating patterns

are examined for their possible influence in this condition.

Psychosocial aspects are studied to determine their influence on hunger, appetite, and satiety; and behavior modification techniques are presented for use in cases where compulsive eating appears to be the problem. I might say here that compulsive overeating is not always the case ... under-exercise is also found to be a dominant factor in inability to lose or maintain weight.

A look at values and priorities has had an exceptionally profound effect on subjects in these treatment sessions. A mixture of stressing the importance of personal responsibility, internal control, and value clarification techniques has received a good response. If there is one main theme in this treatment, it is "Do it yourself" ... "I am not responsible for your weight, you are."

A critique of diets and treatment programs and post-testing done the last sessions rounds out this brief description.

So far, 40 individuals have completed this treatment program. They ranged in weight from 117 pounds to 269 pounds; ranged in percent body fat from 25 to 51%, and were considered to be from 0 to 119% overweight. Eight of the subjects were males, 32 females with an age range of 19 to 53, but an average of 24.5 (only 4 were over age 30). Qualifying in both percent overweight and percent body fat, 16 were clinically obese.

These 40 individuals lost 252.75 pounds in 14 weeks -- this was 6.32 pounds per subject. When t-tested, this was highly significant. During this time 9 lost 5-9 pounds, seven lost 10-14 pounds, one lost 15-19 pounds, two lost 20-24 pounds, and one individual lost more than 30 pounds. After a 7-week period, the 30+ individual had gone to a 45 pound weight loss and 4 others had moved up on the chart also.

At a 7-week follow-up (which happened to occur 1 week after Christmas-New Year's break!) there was no significant weight change, which, of course, signifies maintenance. Three subjects had gained more than 3 pounds, but the group showed an average loss of about 1.5 pounds.

A 14-week follow-up gives a final picture as shown in Figure 1. This shows a sharp drop during treatment, and then an almost steady drop of an average of 1.5 pounds per seven-week follow-up thereafter. This 14-week follow-up average loss of 3.2 pounds is extremely good when compared with behavior modification literature (2, 3, 4, 6).

This has been preliminary work, and formal testing will be fully experimentally controlled in the next treatment session. Because the main theme here is maintenance, the pilot project has been of long duration, but it has done what a preliminary project should do: (1) give time to clear up problems, and (2) point in a direction. I feel that this preliminary work has done both.

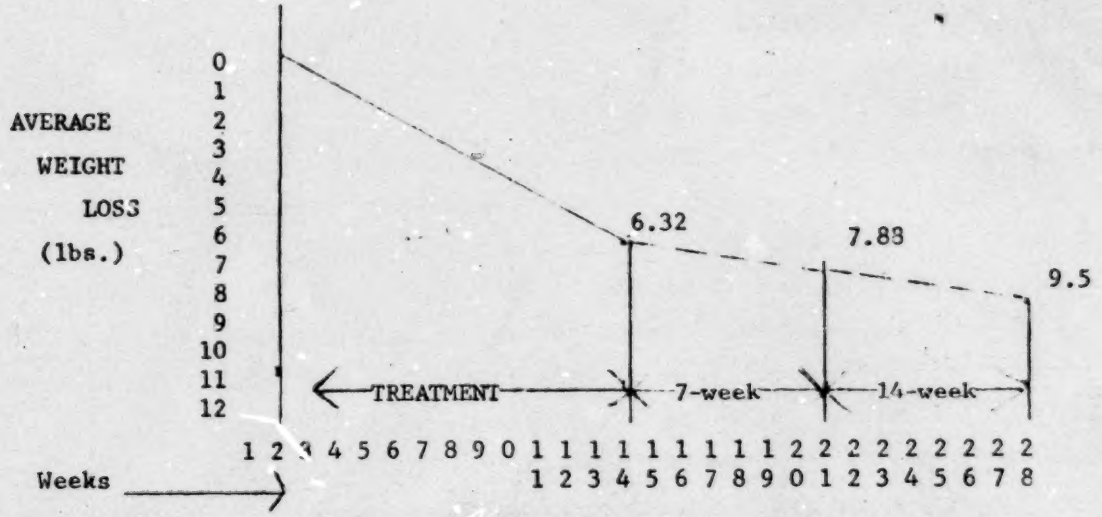

Figure 1. Weight loss at end of treatment (14-wk.); first follow-up (7-wk.); second follow-up (14-wk.).

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